

## REMARKS

### **I. Summary of Office Action**

On July 18, 2010, the Examiner mailed a non-final Office Action.

Claim 6 was rejected under 35 USC §112 for being indefinite.

Claims 1-2, 3, 8, 9, 10 & 11 were rejected under 35 USC §103 for being unpatentable over Kato et al in view of Johnson.

Claims 4-7, were rejected under 35 USC §103 for being unpatentable over Kato and Johnson, in further view of McFarland.

### **II. Summary of Applicants' Response**

The Examiner is respectfully requested to withdraw the objections of Claims 1-11, as amended, in view of the following remarks.

New methods Claims 12 to 22 were added.

In addition, spelling corrections were made to the Specification and the claims.

### **III. 35 U.S.C. § 112**

Regarding Claim 6 the applicants agree that the term “application” was not clear. The concept of “application profile” should have been “communications connection oriented profile” as specified in the published application’s paragraph [0026] line 4. This indicates that besides channel information and system requirements mandated by the higher level application, there is

Date of Deposit: December 9, 2010

another set of parameters (a profile) related to the communications methods that are supported, such as standardized wavelet, or OFDM. Claim 6 has been amended.

#### **IV. 35 U.S.C. § 103(a)**

The examiner rejects Claims 1-2 as being unpatentable over Kato et al. (US Patent Application Pub 2001/0028678) in view of Johnson et al. (US Patent 5,909,463). Although “Kato fails to disclose a selection module which serves to change communications operation modes”, the Examiner believes that “...Johnson relates to a software adaptable transceiver on a single chip which has the capability to change operating modes”. The Examiner writes “the DSP core has the ability to configure the transceiver for various operating modes” and cites Column 9, lines 32-53. This reference, reproduced here (w/o reference numbers) for convenience, refers to the:

“... DSP core processing each of a plurality of transceiver peripheral modules via [the] PIO-EB bus. The plurality of peripheral modules include host processor interface, digital interface, FFT module, CES module, TEQ module and analog front end. It should be noted that peripherals having additional functionality may be added as needed and the present invention is not limited to the particular peripheral modules disclosed herein. ....”

This method is common to system on chip architectures. Each of these peripheral modules is a different module on the chip and provides a dedicated interface or function thereby teaching away from Macaluso, regardless that they may have programmable parameters.

Macaluso's et al. (hereafter Macaluso) invention is that the PHY hardware consist of a series of connected functional hardware modules, including modules such as the m-point IDFT, the “communications operating mode selection module” and the Cyclic Prefix module (figure

1), wherein the “communications operating mode selection module” (154 on the transmit side and 161 on the receive side) is a dedicated piece of hardware that can be controlled to generate on the transmit side or decode on the receive side, completely different communication signal types.

Exemplary signals include Wavelet-like (i.e. Wavelet) signals or FFT-based OFDM signals. Programmable FFT or cyclic prefix blocks parameters are not the difference.

Using Johnson’s PIO interface to configure the peripherals including the FFT (fast Fourier transform), CES (Circular Echo Synthesis) and TEQ (Time Domain Equalization) modules would not make it obvious to include the function that allows the signal to be converted into multiple PLC types in response to a communications connection oriented profile, protocol profile requirements, or channel conditions.

The P/S 5 and P/S 15 modules cited by Kato are the same as the prior art in Macaluso’s figure 1, modules 25 and 34, and Macaluso’s figure 2, 122 and 134. When combined with the “communications operating mode selection module” 154 and 161, they make novel and patentable transceiver and receiver modules.

Claims 2, 3, 9, 10 and 11 are responded to as limiting claims to claim 1 and should be allowed as limitation to claim 1.

Claims 4-7 were rejected under 35 USC §103 for being unpatentable over Kato and Johnson, in further view of McFarland (US Patent Application Pub 2002/0006167) and should be allowed as limitations to claim 1.

The prior art made of record and not relied on was reviewed. Simonsen et al. (US 2002/00031226) (US patent 6,989,733) has the same P/S and FFT blocks as discussed in the claim 1 response and already discussed.

The Applicants did not find any relevance to Tzannes et al. (US 5,497,398) .


**V. New Dependent Claims 12-22**

Applicants have added new independent Claim 12 and dependent Claims 13-22 for the Examiner's consideration. They are methods claims to supplement the current device claims. No new matter has been added and new Claims 12-22 are fully supported and justified by the application as originally filed.

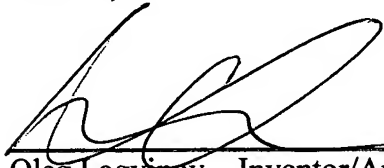
**VI. Conclusion**

This response attends to each point noted by the Examiner. Claims 1-11 currently pending and new Claims 12-22 in this case are now proper and patentable. Allowance is respectfully requested. However, should the Examiner deem that further clarification of the record is in order, we invite a telephone call to contact any of the Applicants prior to the issuance of the next office action to expedite further processing of the claims to allowance.

Respectfully submitted,

  
\_\_\_\_\_  
Michael J. Macaluso - Inventor/Applicant  
Jackson, NJ

12/17/2010  
Date

  
\_\_\_\_\_  
Oleg Logvinov - Inventor/Applicant  
East Brunswick, NJ

12/17/2010  
Date

\_\_\_\_\_  
Bo Zhang - Inventor/Applicant  
Somerville, NJ

12/17/2010  
Date

All of:

Arkados, Inc.  
Suite 202  
220 New Old Brunswick Rd.  
Piscataway, NJ 08854.

Telephone No. (732) 465 9300  
Telefax No. (732) 465-9600